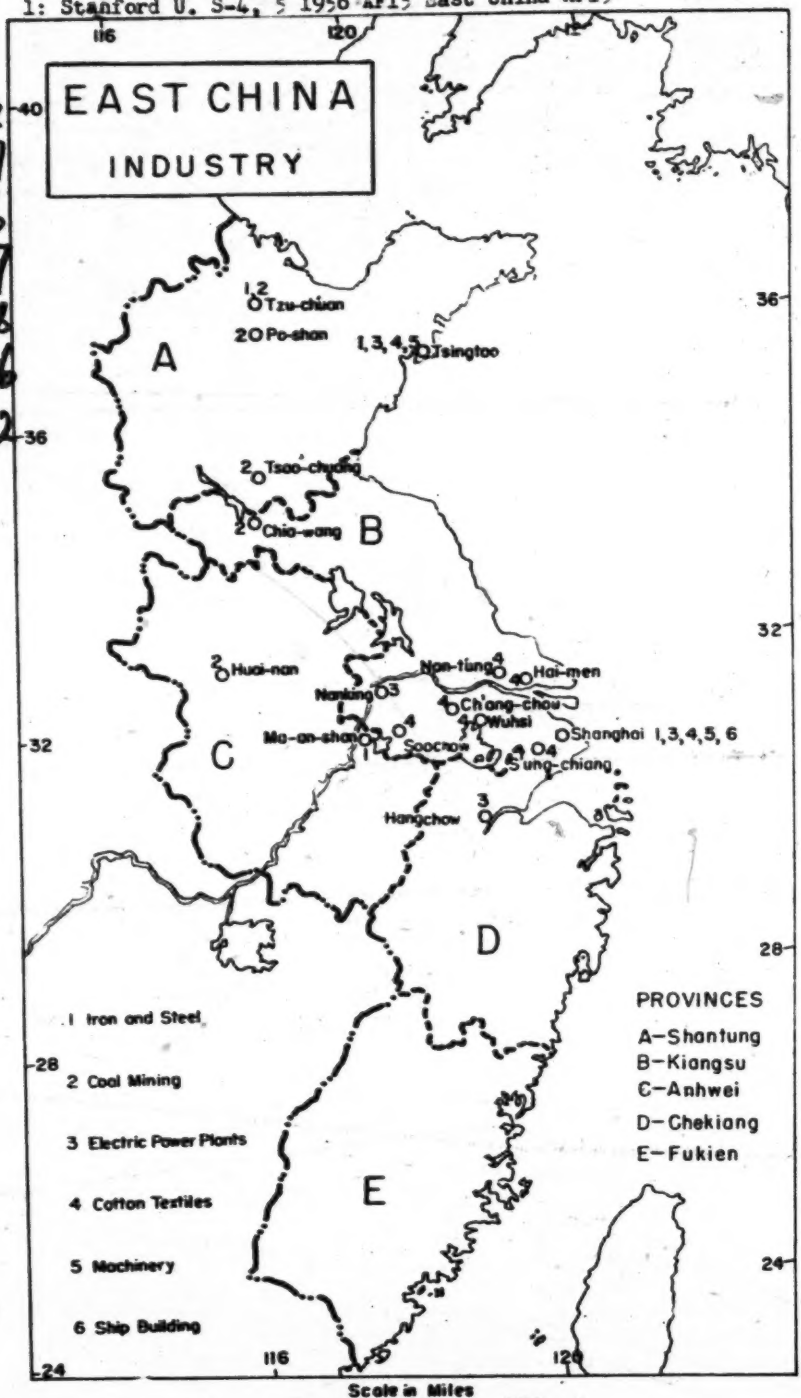
1: Stanford U. S-4, S 1956 AF15 East China AF15




[Face p. 769(a)]

316 433 shafts in the latter part of the same year. The shafts are scheduled for completion in 1957.[13] Capital investment was said to have been stepped up during 1955 when total annual investment was to equal the entire amount invested in 1951-1954. The reconstruction of four pits was said to have been completed in April 1955, raising the mine's output by 17 per cent.[14] The same report also mentioned the construction of more new shafts than the number mentioned in the report of the preceding year. Total production at Huai-nan, according to the Five-Year Plan, will reach about 6.85 million tons in 1957, which, if accomplished, will make it one of the largest mines in the country outside Manchuria.[15]

B. Electric Power

• 377 Since the establishment of the Communist regime there has not been any report on the construction of large thermal power plants in East China. According to a comparatively complete report in 1948, there were 23 electric utility plants in this area, ranging

13. New China News Agency, Hopei, March 16, 1954.

14. Survey of China Mainland Press, Hong Kong, April 15, 1955, No. 1,028, p. 30.

15. Ta-kung Daily, Tientsin, July 30, 1955.

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•377 from the 640-kilowatt plant at An-ch'ing in Anhwei Province to the 173,500-kilowatt plant of the American-owned Shanghai Power Company. The total capacity of these plants amounted to 395,693 kilowatts in 1947,[16] and was subsequently reported to have been 578,257 kilowatts in 1950, according to another source.[17] During 1947 the total output of electricity generated amounted to 133.7 million kilowatt-hours.[18] According to the Communists, the electric power output showed an increase of over 30 per cent in 1952 for the region as a whole as compared with the pre-Communist period.[19] In Shanghai, largest center in the consumption of electricity, a market reduction in household consumption has been reported since the arrival of the Communist; industrial consumption has increased correspondingly.

Another notable development in the generation of electric power in East China is the conversion of the Shanghai Power Company plant from fuel oil to coal.[20] This was

16. Chung-hua Nien-chien [China Year Book], Shanghai, 1948, pp. 1, 539-542.
17. Newspaper Reading Handbook, Hankow 1950, pp. 513-14.
18. Economic Bulletin, Hong Kong, March 29, 1954, p. 12.
19. Shanghai News, Shanghai, May 29, 1952.
20. Liberation Daily, Shanghai, May 28, 1952.

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377 carried out both to reduce foreign exchange outlay and as a countermeasure to the Nationalist blockade. However, this development has led to even greater dependence on coal which, as we have seen, is by no means easily available in East China.

C. Iron and Steel

327 433 As for the iron and steel industry in this region, two large blast furnaces were installed by the Japanese at Tsingtao in Shantung Province during 1943 and 1944. These had an estimated annual capacity of 110,000 tons of pig iron.[21] At Ma-an-shan in Anhwei Province the Japanese also planned to erect 20 small blast furnaces with an estimated capacity of about 73,000 tons.[22] Two small blast furnaces with an estimated capacity of 16,000 tons a year were also reported in operation during World War II.[23] Recent information has been lacking in detail, although it is known that the Ma-an-shan plant is being expanded under the Five-Year Plan and that pig iron shipments from Ma-an-shan to Shanghai have been in progress.

21. Foreign Minerals Survey, Washington, D.C., Department of Interior, Jan. 1948.
22. Ibid., Vol. II, No. 7, pp. 35.
23. Ibid.

2: Murphy G-4 (no date) 1953 AF15 East China AF15



and public utilities industries, and relatively smaller-scale production in the paper-printing, chemical, metal working, wood working, leather-rubber, and scientific-instruments-jewellers industries. 47/

*For the Chinese Municipality*

| *Indu* | *Number of Factories* | *Number of Workers* |
|---|---|---|
| textiles | 690 | 73,448 |
| vehicles (including boats) | 46 | 50,472 |
| food, drink, and tobacco | 84 | 32,379 |
| clothing | 344 | 16,621 |
| machinery | 720 | 16,708 |
| rubber and leather | 78 | 11,845 |
| chemical (including soap, matches and industrial chems.) | 121 | 7,426 |
| power generating | 8 | 5,267 |
| wood working | 25 | 4,101 |
| brick, tile, cement and glass | 61 | 3,370 |
| iron works | 169 | 3,224 |
| building materials | 31 | 1,796 |
| scientific apparatus and jewellery | 72 | 1,779 |
| furniture | 46 | (no figures) |
| others | 181 | 17,023 |
| Totals | 2676 | 245,664 |

Machinery is high on this list also, but the figures show an average of only 23 workers per factory producing machinery. The [396] relatively high place of vehicles and the apparently large scale of production in this industry are presumably accounted for by the two shipyards attached to the Kiangnan Arsenal and by the five foreign-owned shipyards on the right bank of the river.[6] Power [377] generating is necessarily a large-scale industry, but it may be doubted whether six of the eight plants listed here are independent establishments rather than adjuncts, and particularly whether as many as 5,267 workers are employed directly in this industry or whether at least half of this figure represents auxiliary labor outside the plants themselves, such as linesmen, service men, etc.

The relative importance of the other industries listed here is about the same as listed for the Settlement, despite slight differences

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ings slightly altered to house machinery which is tended by the residents of the house, often members of one family. These small industries are engaged in a bewildering variety of production, and despite their universal under-capitalization, most of them use electrically-driven machinery. "Factories" of this kind produce, for instance, machine tools, cast iron, electric appliances, soap, acids, textile machinery, power presses, boilers, and telephone parts, as well as a long list of light consumer goods, such as flashlights, light bulbs, thermos flasks, clothing, lamps, electric fans, and food products.[9] Despite crowding and poor working conditions, the quality of production in these plants was apparently high. American orders for telephone parts were placed in Shanghai from 1932 to 1935 for export to South America, and the contracts went predominantly to these small household operators.[10] There was a very high rate of turnover among these "factories"; their small scale and small capitalization enabled them to react with great sensitivity to market changes and to crowd or evacuate lines of production alternately as profits varied.*

### *Market and Raw Materials*

Market considerations are the leading factor in the concentration of manufacturing as a whole in Shanghai. As the primate commercial and industrial center of China, not only were capital, relatively trained industrial labor, and electric power available there more abundantly and in most cases more cheaply than anywhere else in China, but Shanghai includes in its trade hinterland half of the country. With the notable exception of the textile industries, most of the raw materials necessary to maintain Shanghai's manufacturing were not available locally in its immediate hinterland. It was the market which attracted and held most manufacturing.

We may logically begin with the exception, the textile industries. Shanghai is located near the center of China's chief cotton-producing

* The *Chinese Economic Bulletin*, published in Shanghai, records many of these changes. For example, there were 11 industrial establishments in Shanghai in November 1930, producing "gourmet powder" (made mainly from wheat flour), 9 in October 1931, and none in June 1932, according to the *Bulletin's* weekly industrial news columns.

2: Murphy G-4 (no date) 1953 AF15 East China AF15



munist government) was by far the largest. An official of the company estimated that it was responsible for an average of 83 per cent of the total sales of electric power in Shanghai for the period 1925–1934, and that 78 per cent of its sales during this period were to industrial users, distributed as shown in the accompanying table.[55]

| *Industry* | *Percentage of Total Industrial Power Sales* |
|---|---|
| cotton mills | 78 |
| flour mills | 7 |
| rubber goods factories | 2 |
| miscellaneous textiles | 2 |
| other industries (less than 1 per cent each) | 11 |
| | 100 |

The city's dominant industry, cotton textiles, was thus apparently heavily dependent on rented electric power. All of the five power plants in Shanghai were entirely carbo-electric. The Shanghai Power Company operated two plants, one at the northeastern tip of Yangtzepoo (the "Riverside" plant), and the other near the mouth of Hongkew Creek (map 3). Of the other three plants, one was owned by the French Municipality and was located on Siccawei Creek at the southern edge of the French Settlement, and two were Chinese-owned, located respectively in Nantao and Chapei. The silk-reeling industry does not appear in the above table because it used primarily steam power (and steam heat), which was produced on the factory premises from coal. Approximately 80 per cent of the industrially-used electric power was purchased from the power companies, and only about 20 per cent was generated by the industrial consumers themselves. Fully half of this 20 per cent was accounted for by the generators of the Kiangnan Arsenal.[56]

Shanghai produced in 1936 58 per cent of the electric power generated in China, and the "Riverside" plant of the Shanghai Power Company had a larger output in 1930 (450 million kilowatt-hours) than any single station in England.[57] The combined output of all four power companies in 1930 was greater than in any English city except London.[58] This power was sold at very low rates, special rate arrangements being made for large industrial users.